

SOLID WASTE MANAGEMENT FIVE YEAR PLAN UPDATE 2018 – 2022

Environmental Quality and Public Works Committee

August 22, 2017



LEXINGTON

Five Year Plan

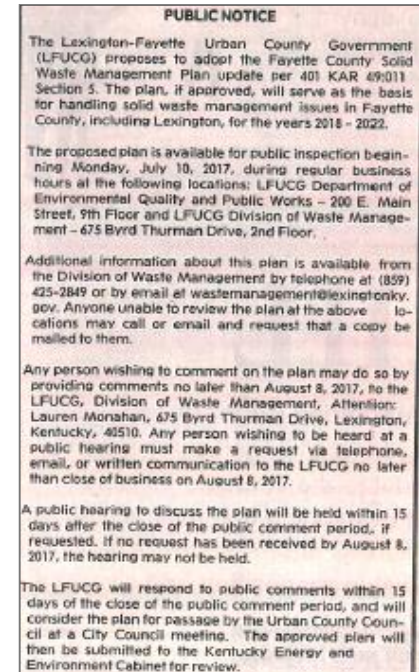
- Per KRS 224.43-340, the Commonwealth of Kentucky requires every county to prepare and submit a Five Year Plan.
- The Plan is a summary of current waste management programs and initiatives for next five years.
- The period covered is January 2018 through December 2022.
- Keep Lexington Beautiful Commission served as the Advisory Committee.





Public Notice and Comment Period

- Public Notice published in Lexington Herald-Leader: Sunday, July 9, 2017
- Public Comment Period: July 10 – August 8 (30 days)
- The Plan was available for public viewing at the following locations:
Department of Environmental Quality and Public Works,
Commissioner's Office
Division of Waste Management
- No written comments and no requests for a public hearing were received during the public comment period.



Lexington's Division of Waste Management

- Largest municipal waste operation in Kentucky
- Budget: \$37 MM
- 231 employees and up to an additional 110 daily workforce
Plan is also supported through the operations across divisions within the Department of Environmental Quality and Public Works, as well as contractors such as Seedleaf and Bluegrass Greensource.
- Diverse operations includes:
 - Collection Services
 - Disposal Services
 - Waste Transfer Services
 - Materials Recovery Services
 - Electronic Recycling Services





Collection Services

- Technology
 - RouteWare collection routing system
 - Zonar maintenance and monitoring system
- Optimization
 - Compressed Natural Gas (CNG)
 - CMAQ CNG Grant improvements
 - Increasing operational efficiency
 - Downtown area development focus
- Services
 - Serve over 90,000 residences each week and 4,000 businesses twice a week
 - Loan A Box Program expansion
 - 21.8% average increase in program revenue within last two years
 - Special event waste services



"I would consider LFUCG a "Super User" of Routeware. LFUCG is one of the more sophisticated users of the system as they have put in place policies and procedures that merge and benefit the RouteWare experience and the Division's goals and objectives."

- Mark C. Fournier, RouteWare
Director of Solutions Engineering





Disposal Services

- Disposal
 - Bluegrass Regional Transfer Station
 - Managed by Waste Services of the Bluegrass (WSB)
 - In third year of five year contract
 - Haley Pike Landfill permit
 - CDD accepted at Thoroughbred Landfill and Transfer Station
 - Yard Waste Transfer Station
 - Hazardous Waste Collection events
- Environment
 - Ongoing landfill monitoring
- Organics
 - Organics Recycling Feasibility Study
 - State grant funding awarded for researching organics
 - Ongoing Waste Characterization Analyses
 - New contract with Red River Ranch to manage composting facility at Haley Pike



Bluegrass Regional Transfer Station



Haley Pike Waste Management Facility



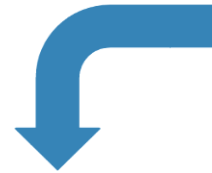


Materials Recovery Services

- Technology
 - Exploring new markets
 - Plastics #3 - #7
 - Glass
 - Cardboard
- Efficiency
 - Upgrading facility and equipment
 - Acquiring second baling machine for cardboard
- Outreach
 - Over **36,000 tons processed** each year
 - Agreements with regional affiliates
 - 17 regional affiliates (as of July 2017)



Materials Recovery Facility





Electronics Recycling Services

- Markets
 - Exploring new markets
 - Competitive bidding for recycling contracts
- Efficiency
 - Collect average of **seven tons** per week from residents
 - Increased security during disposal process
- Repurpose
 - Over **18 tons** diverted for reuse through the Electronics Recycling Program Non-Profit Agencies (February 2015 to present)



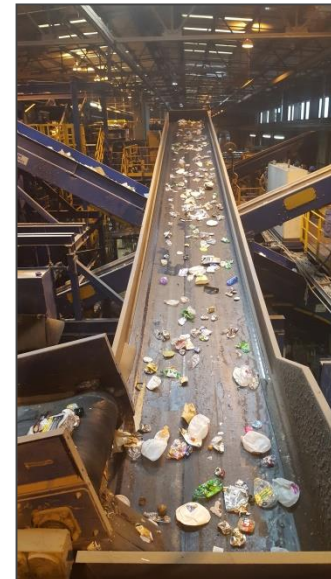
Electronics Recycling Facility





Achievements within Last Five Year Plan Period

- Fleet conversion to **Compressed Natural Gas (CNG)**
- Efficient Collection Services through **Routeware** Implementation
- Expansion of **Loan A Box Program**
- Study of **Downtown Collection** Services
- Annual **Household Hazardous Waste** Collection
- Increased **Special Event** Programs and Outreach
- **Regional Recycling Commitment**
- **Educational Outreach** to Schools and Businesses



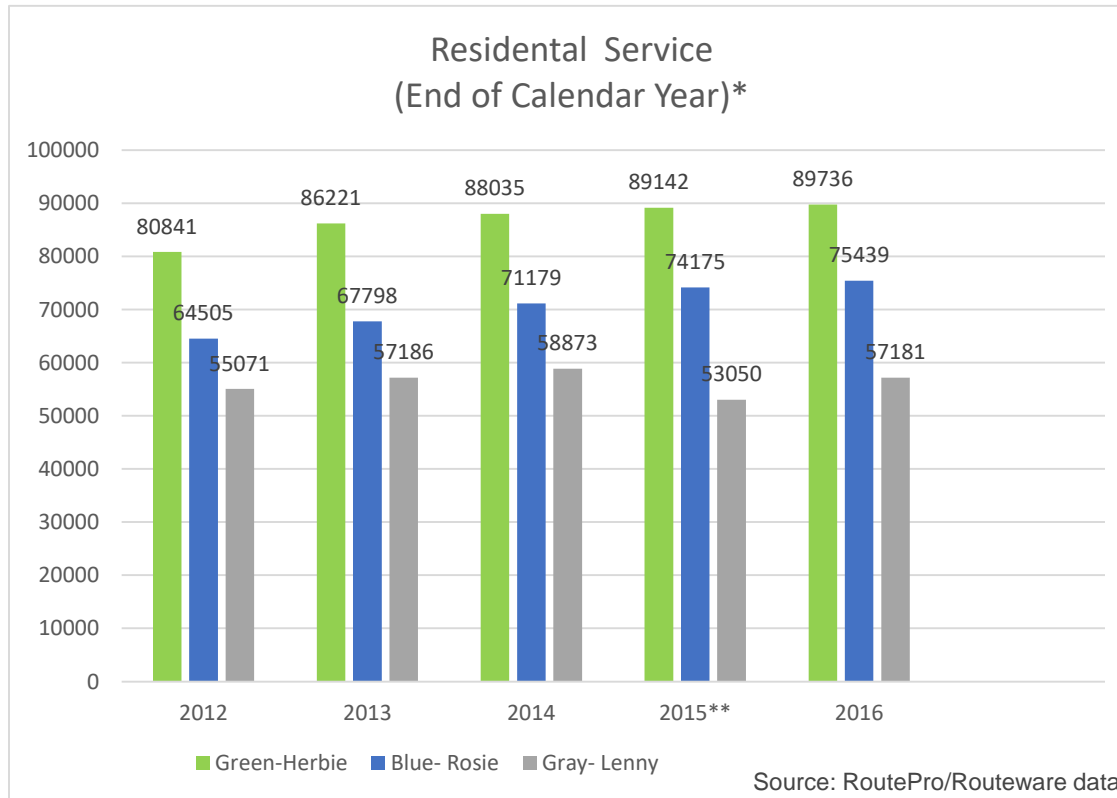
Materials Recovery Facility



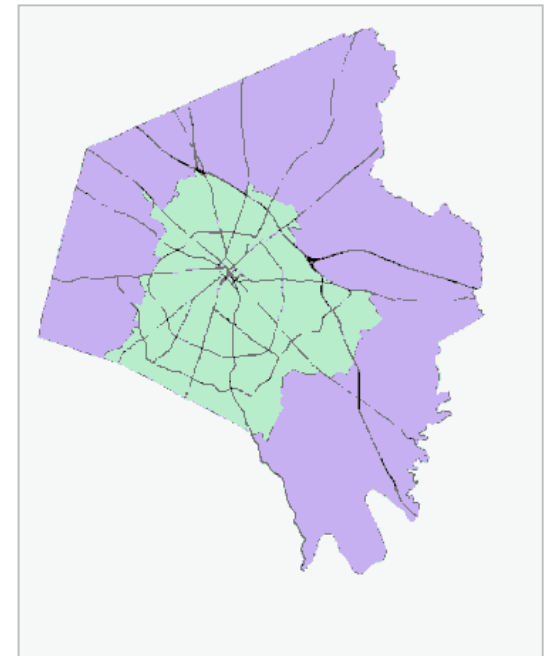
Underground Collection System Research



Growth in Services Over Last Five Year Plan Period



*Lexington continues to grow with **newly-developed neighborhoods** within the Urban Service District.*



Lexington-Fayette Urban County (purple) and the Urban Service District (green)

*Growth rate over last five years includes: 2% refuse growth, 3% recycling growth and 4% yard waste growth. As an example, 3% growth is equivalent to approx. 2,700 new service points.

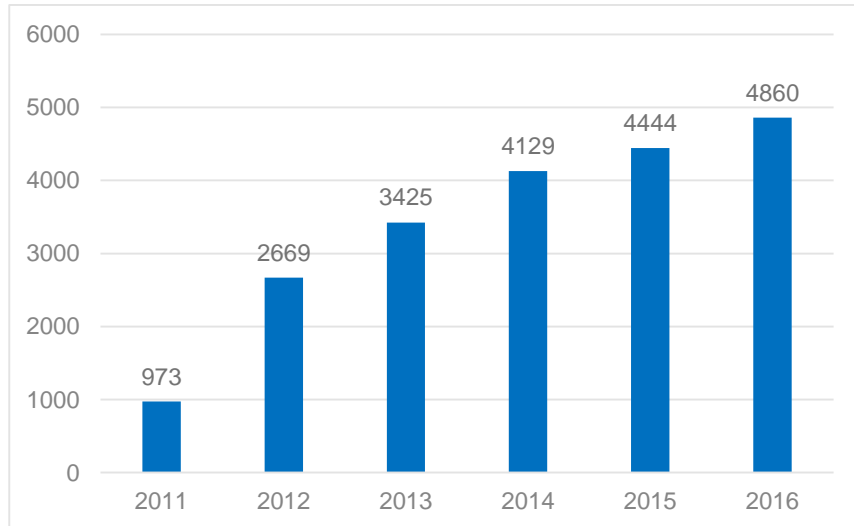
**Lower yard waste totals attributed to service being brought into compliance with ordinance.



Growth in Services Over Last Five Year Plan Period

Commercial Services

Business Recycling Services
(End of Calendar Year)

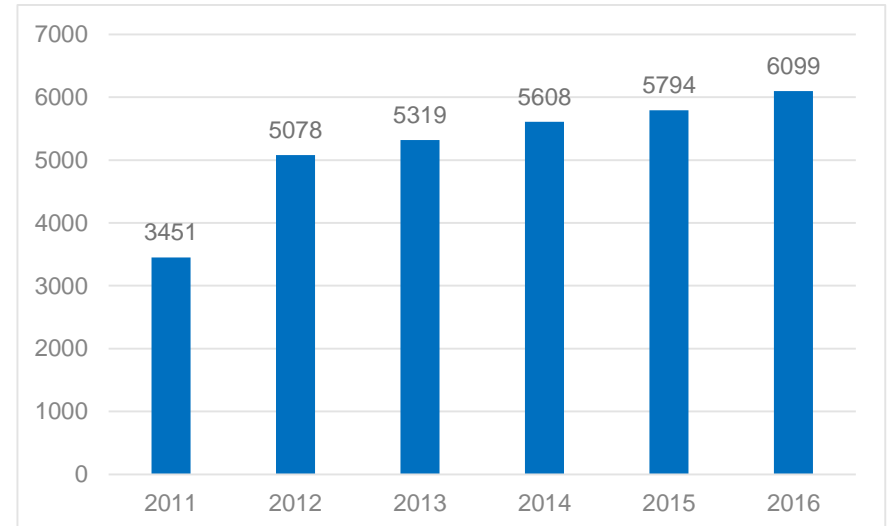


Source: RoutePro/RouteWare data

*Growth over last five years includes 10% increase

**10% growth rate is equivalent to approx. 600 new service points

Business Refuse Services
(End of Calendar Year)



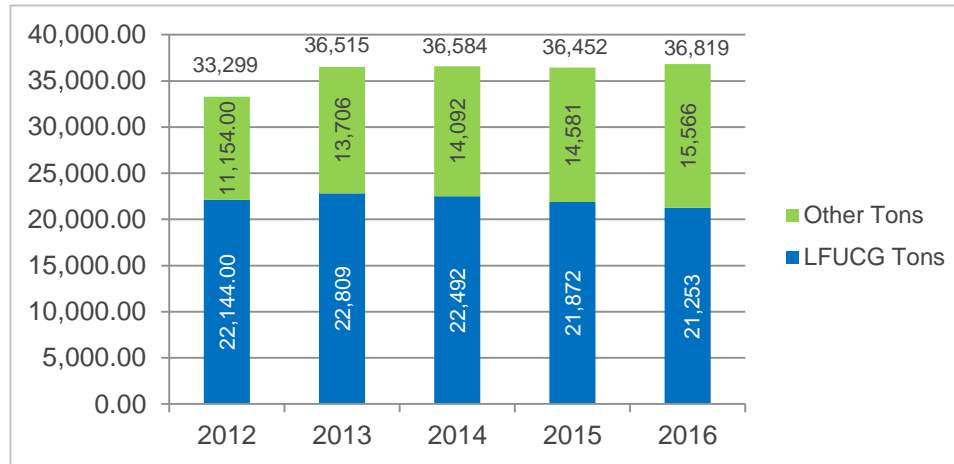
Source: RoutePro/RouteWare data

*Growth over last five years includes 24% increase

**24% growth rate is equivalent to approx. 1,165 new service points

Growth in Services Over Last Five Year Plan Period

Tons of Material Processed at the Materials Recovery Facility*



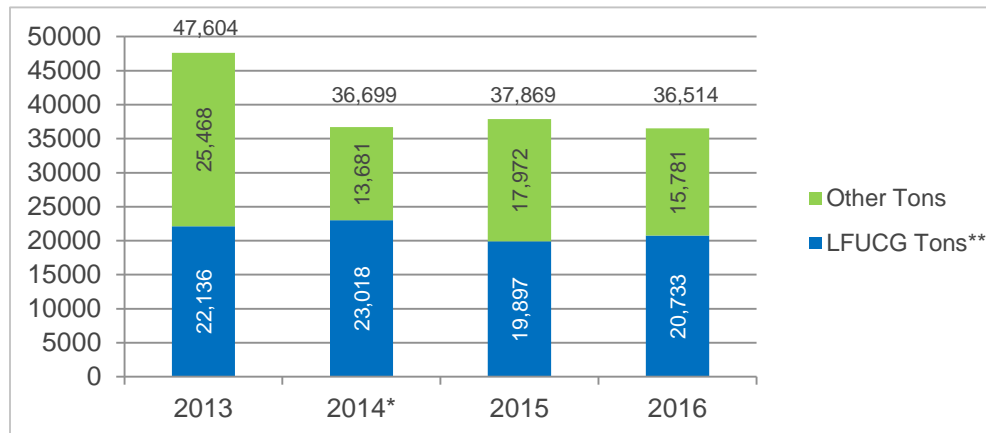
*Total in-bound tonnage,

Source: Facility scale data



Sorted paper at the MRF

Tons of Material Processed at the Haley Pike Composting Facility



*Facility stopped accepting wooden pallets in 2014

Source: Facility scale data

**LFUCG share includes curbside residential collection, fall leaves and storm debris

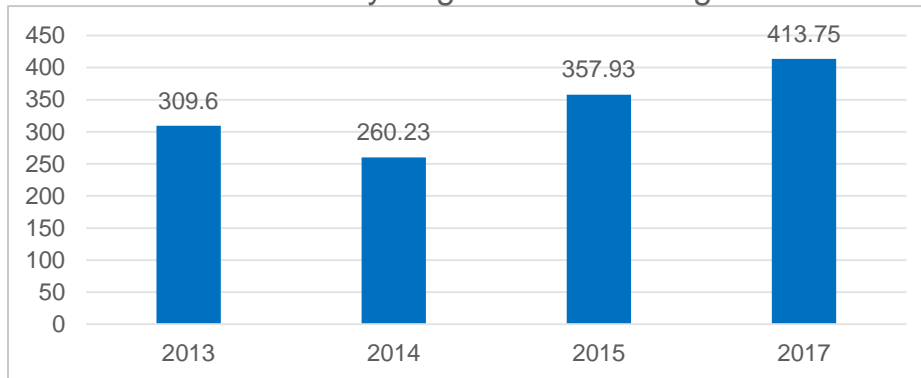


Haley Pike Composting



Growth in Services Over Last Five Year Plan Period

Electronic Recycling Material Tonnage



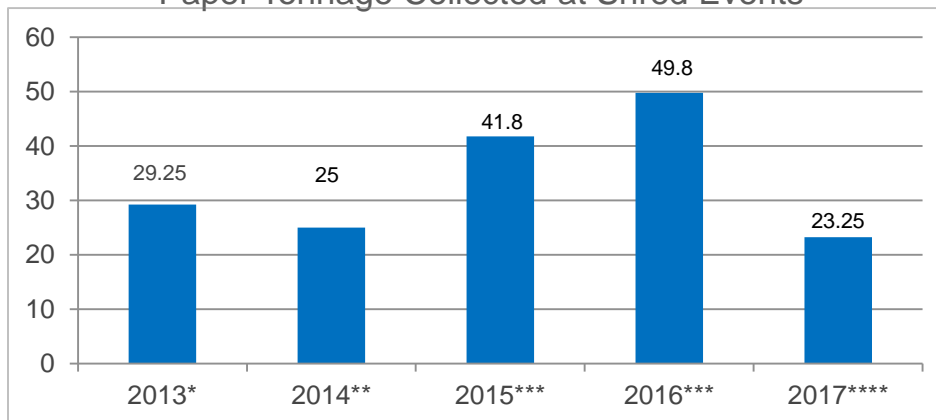
Note: Since 2/15, 18 tons not shown have been diverted via the Electronics Recycling Program for Non-Profit Agencies

Source: Shipping manifests



Old computers to be recycled

Paper Tonnage Collected at Shred Events



*Four smaller events in 2013

**One event in 2014

Two events in 2015 and 2016 *One event held in 2017 thus far.

Source: Shred company scale data

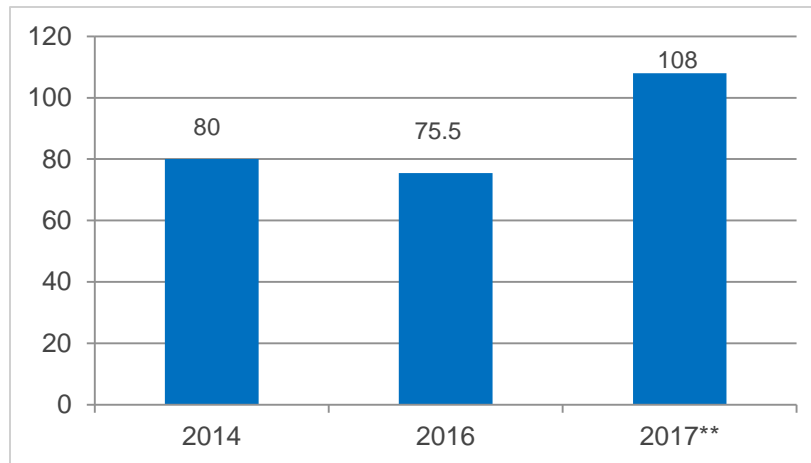


Unloading a resident's vehicle at a Paper Shred Event



Growth in Services Over Last Five Year Plan Period

Household Hazardous Waste Tons Collected



*No events in 2013 or 2015

Source: Collection data

**Large increase in 2017 tonnage is due in part to Habitat for Humanity's limitations on amount of latex paint their recycling program could accommodate at that time

Fall 2015 State Tire Amnesty Collection Event

- 45,000 tires collected at 2015 event
- Held every three years
- Next Event: TBA Fall 2018



Unloading a resident's vehicle at a Household Hazardous Waste Collection



Tires collected at 2015 event



Reduce, Reuse, Recycle

- Lexington continues to explore new methods to significantly **decrease landfill disposal**.
 - All programs support **landfill diversion efforts**
 - Overall, **zero waste** is a long term goal
 - **Significant waste reduction** achieved through **Reduce, Reuse, Recycle!**
- Focus on **Reduce, Reuse, Recycle**:
 - **Reduce** amount purchased, used and consumed
 - **Reuse** or repurpose items; donate items to charity; re-sell items
 - **Recycle** acceptable items after they have been used and reused
- Growth opportunities in **alternate methods of organics and sludge disposal** as Lexington's next significant diversion option.



Growth Opportunities in Organics

- **Organics Study** – Grant funds obtained to develop a comprehensive approach to city-wide diversion and detail viable options
- **Partner with community groups** for organics and other diversion programs and initiatives
- **Waste Characterization Studies** – Identify items left in the waste stream with potential for diversion

2014 study results show:

29.8% of aggregate solid waste stream contains easily compostable materials with breakdown of:

- 22.6% organic material
- 12.3% food waste material

Sorting materials during a Waste Characterization Study



Questions?

